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(54) **METHOD AND APPARATUS FOR HIGH RATE PACKET DATA TRANSMISSION**

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H04W 4/00   (2009.01)
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(52) **U.S. Cl.** **370/347**; 370/332; 370/328; 455/452.2; 455/423; 455/67.11

(58) **Field of Classification Search** 370/347, 370/332, 333, 328; 455/450–452.2, 423–425, 455/67.11
See application file for complete search history.

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(57) **ABSTRACT**

In a data communication system capable of variable rate transmission, high rate packet data transmission improves utilization of the forward link and decreases the transmission delay. Data transmission on the forward link is time multiplexed and the base station transmits at the highest data rate supported by the forward link at each time slot to one mobile station. The data rate is determined by the largest C/I measurement of the forward link signals as measured at the mobile station. Upon determination of a data packet received in error, the mobile station transmits a NACK message back to the base station. The NACK message results in retransmission of the data packet received in error. The data packets can be transmitted out of sequence by the use of sequence number to identify each data unit within the data packets.

35 Claims, 15 Drawing Sheets